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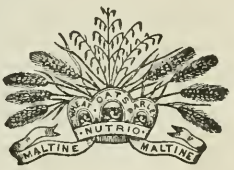

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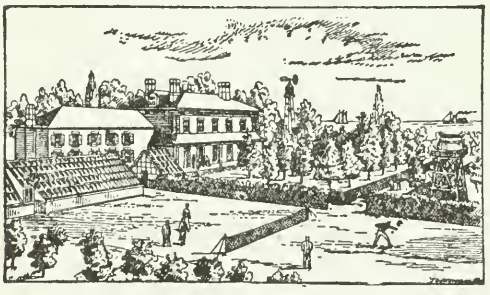

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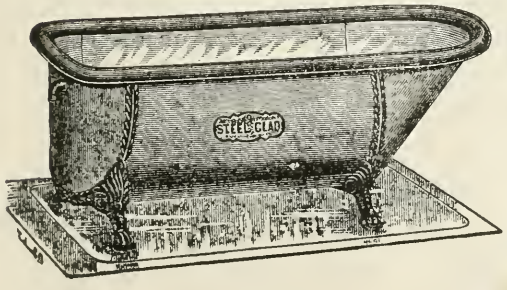

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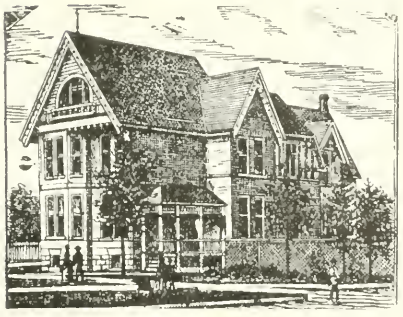

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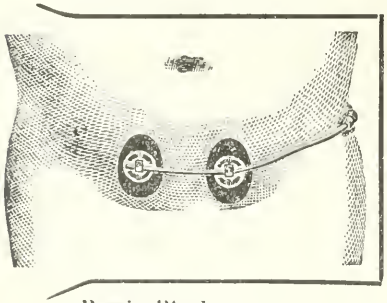

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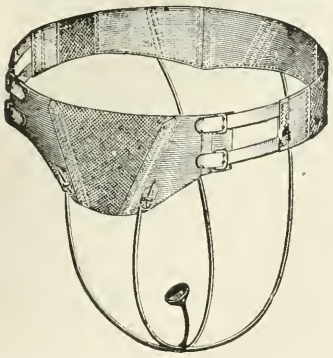

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VOL. II.] TORONTO, OCTOBER, 1895. No. 4

Original Communications.

Laryngeal Neoplasms.

BY WALTER F. CHAPPELL, M.D., M.R.C.S. ENG.

Surgeon to the Manhattan Eye, Ear and Throat Hospital, New York.

DURING the past year an unusually large number of laryngeal diseases have been treated in my service at the hospital. Although they are not all of equal importance, every affection of this part of the respiratory tract may be considered as having an interest of more or less individual nature. Especially is this true when the larynx is the seat of a new growth, the size, shape, situation and nature of which may seriously alter the character of the vocal sounds and interfere with the functions of respiration and deglutition to such a degree as to imperil the life of the patient. Unfortunately this condition is often reached before a physician has been consulted. Hoarseness, with impaired respiration and deglutition, are most frequently the initial symptoms of a serious disease of the larnyx ; their appearance, however, is usually so insidious that they may have existed for months without attracting much attention or causing discomfort. In due time something occurs which determines the necessity of a laryngeal examination, and the serious import of the symptoms is appreciated. The histories of the

following five patients are selected, as being the most unusual and interesting cases of laryngeal neoplasms, which were treated in my service in the throat department of the hospital during the year:

Case 1. Nora Ring, aged five years, came to the hospital March 19th, 1894. Her mother said the child had been somewhat hoarse since birth, and suffered from frequent attacks of croup, especially during the winter months. For the past six months her breathing had been labored and was accompanied by choking and suffocative attacks at night. Three weeks before her visit to the hospital she contracted measles, and during the attack there was considerable irritation of the upper respiratory tract. Her condition on visiting the hospital was one of great discomfort—face pale and anxious, with bluish lips and alæ nasi much distended at each inspiration; the latter was difficult and labored, calling into action the accessory muscles during each inspiratory effort.

On the evening of March 20th, the respiration became so labored that my assistant, Dr. Frank K. Roarke, was called. He introduced an O'Dwyer tube, but owing to the thick, tenacious character of the mucus in the larnyx and trachea, air would not pass readily through the tube. Respiration being more embarrassed by its introduction, it was removed, a high tracheotomy performed, and a small tracheal tube introduced.

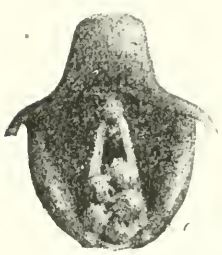

Fig. 1.
Congenital Papillomata.

Recovery from the tracheotomy was uneventful, and on the 7th of April the patient was able to walk about the ward. Prior to this time no air had passed through the larynx when the tube was removed, but some respiration was now possible. The catarrhal symptoms of the trachea and upper bronchial tubes having greatly diminished, a laryngoscopic examination was made. The rima glottidis was found to be packed with irregular, red papillomatous masses of various sizes and shapes. Shreds of yellow mucus occupied the spaces between the growths. Alkaline sprays were employed daily in the larnyx for some weeks, and a laryngoscopic examination made from time to time. About the middle of June, the papillomatous masses had lost their œdematous appearance and diminished so much in size that their individual characters could be observed and their attachments well determined. Prior to this observation, the laryngeal obstruction seemed to result from large, fleshy, fringed masses, as already described, but from a sketch taken in June and represented in Fig. 1, it will be seen that there were really seven distinct papillomata, which, owing to

the catarrhal laryngitis, had become swollen and œdematous. There were two papillomata on each cord, one in the inter-arytenoid space, and another in the anterior commissure near the lower part of the cushion of the epiglottis, but above the cords; while another was attached to the anterior wall of the trachea immediately below the cords. The papillomata gradually diminished in size until by the 1st of October, those on the cords and the one in the posterior commissure had entirely disappeared, leaving the cords red and somewhat thickened. The growth in the anterior part of the larynx had diminished in size, but had a firm, nodular appearance. As the patient was anxious to leave the hospital, the removal of the remaining portions was decided upon, and effected after considerable training of the throat. On the 10th of October the tracheal tube was removed and the wound closed; and on the 17th the child left the hospital with the tracheal wound healed.

This case is of unusual interest, as there is every evidence from the history of the hoarseness, shortness of breath on exertion, and frequent attacks of croup, that it was one of congenital papillomata, and although Mackenzie, in 1871, considered congenital papillomata as unproven, their presence is now admitted by most observers. It furthermore raises the question whether tracheotomy, producing functional rest of the larnyx, may not in some cases favor atrophy of the papillomata and their complete and permanent disappearance. Certainly in this case, although only three months have elapsed since the tracheal wound closed, there is not the slightest evidence of recurrence, and from week to week the cords become thinner and paler, and the voice improves in ratio. My somewhat limited experience with the treatment of laryngeal papillomata in children by thyrotomy has given much less favorable results, as the frequent recurrence of the growth required the operation to be performed two or more times on each case, and left the voice much impaired.

The next case, represented in Fig. 2, is one of sarcoma of the epiglottis, and, I believe, is the largest one reported in the literature of laryngeal neoplasms as originating in this situation. The location is not an unusual one for cysts, papillomata, fibromata, etc., but only two authentic cases of sarcoma of the epiglottis have been reported; one by Morrell Mackenzie in his essay on one hundred cases of laryngeal growths, and another by Dr. Burow in *Berlin. klin. Wock.*, No. 8, 1887. In Mackenzie's case, although the growth was comparatively small, it produced almost complete aphonia and extreme dyspnœa. Burow's patient, and the one now presented, although having much larger growths than Mackenzie's patient, gave little evidence in their voices of the

size of the neoplasms. Burow describes the voice of his patient as being peculiar in tone. The voice of my patient was flat, and although the lips and tongue made the movements for vocalization, they seemed devoid of sound, the voice apparently coming from a distance. The difference in character of the vocal tones was doubtless due to the positions of the neoplasms, which in one case infiltrated the cushion of the epiglottis, and was just large enough to insinuate itself between the cords and prevent their coaptation, and at the same time diminished the area of the respiratory tract in its most important part. The large size of the other neoplasms and their higher attachment kept them well above the vocal bands, and interfered but little with their functions.

FIG. 2.

Sarcoma of the Epiglottis.

Case 2. Bridget O'R. Aged 32 years. Came to the throat department or the hospital July 23, 1894, complaining of choking sensation in the throat. Family history negative.

Personal History.—Always well until four years ago, when she had nervous prostration. About a year later she noticed that her voice was rather flat, and it required a little effort to produce a clear sound. Eighteen months from the first appearance of the vocal change, she experienced some difficulty in swallowing, and the solid particles of food seemed to lodge near the root of the tongue.

Present Condition.—Patient looks pale, emaciated, and somewhat cyanotic, and coughs incessantly. Respiration about normal, while the patient is quiet, but slight exertion makes it rapid and labored. No pain had been experienced and the performance of ordinary duties produced so little discomfort that she had never before consulted a physician.

On laryngoscopic examination, a round, somewhat lobulated white tumor about the size of a hen's egg was seen at the base of the tongue and behind the epiglottis, almost filling the oropharynx and covering the larynx. Its location and appearance is very well shown in Fig. 2. The mass was elastic and freely movable, and being attached by a rather long and narrow pedicle, it came well up into the back part of the oral cavity during deglutition.

Several large vessels coursed over its upper surface. The white, glistening appearance and feeling of fluctuation on palpitation, suggested a large cyst. A puncture was made into the centre of the mass, but resulted only in a severe hæmorrhage. The patient was admitted to the hospital on the 25th of July, and an attempt made to remove the growth, but the administration of both ether and chloroform embarrassed the respiration to such a degree that a low tracheo-

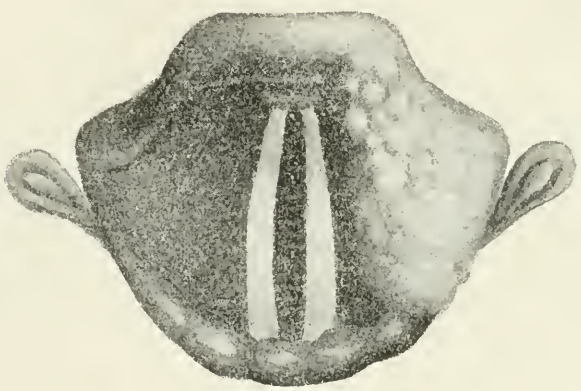

Fig 3.
Syphilitic Neoplasm.

tomy was performed. Convalescence from the tracheotomy was rapid and uneventful. On August 3rd, after finding that the attachment was limited to the margin of the epiglottis on the right side, an 8 per cent. solution of cocaine was applied and a loop of platinum wire thrown around the pedicle of the growth. An intermittent electric current was passed through the platinum wire and within five minutes the pedicle was divided and the mass fell out of the mouth. Very little hæmorrhage followed. The voice at once resumed its natural tone, and on examination the cords and larynx were found to be normal in appearance. Very little pain or reaction followed the use of the cautery, and on the 5th of August the tracheal tube was removed and the opening closed. On the 8th, the patient was discharged from the hospital.

On the 15th September, she visited the hospital again, but no trace of neoplasm was apparent.

Her general nutrition was much improved and she had gained ten pounds in weight.

On examination the growth was found to weigh 360 grains and to be 4½ inches in its greatest circumference and 3⅝ inches in its lesser. A microscopic examination was very kindly made for me by Dr. E. K. Dunham, of the Carnegie Laboratory, who reported that the growth was a sarcoma of the variety called by the Vienna school "perithelioma," and that the prognosis was rather more favorable than in most other varieties of sarcomata.

Although many authorities on laryngeal neoplasms believe that an expert should have little difficulty in making a diagnosis between

Fig 4.

Epithelioma of the Larynx.

syphilitic and malignant disease of the larynx, plates 3 and 4 of Cases Nos. 3 and 4, with their histories, illustrate the perplexities which may be experienced. The age of one of these patients favors malignant disease, while that of the other favors syphilis. Neither admitted any knowledge of a specific primary affection, and although each was given five drachms of potassium iodide daily for a week, neither showed any diminution in the size of the laryngeal growths. They both complained of burning and stinging sensations in the larynx, and while one had chewed as much as an ounce of tobacco daily for fifty-four years, the other followed cigar wrapping as his employment, and has kept daily small pieces of tobacco in his mouth for many years. My colleagues who saw the cases, agreed that in location, size, shape, formation, and color, the neoplasms bore a remarkable resemblance to one another,

and it was the general opinion that they were malignant in character. Both seemingly arose from the left ventricular band, which is probably the most frequent situation for the initial deposit of malignant neoplasms, and passed upwards along the lateral walls of the pharynx to the posterior surface of the epiglottis into the left glosso-epiglottic fossa. After the administration of the first course of potassium iodide, a microscopic examination of a portion removed from the older man's throat proved the growth to be a epithelioma. No microscopic examination was made in the other case. The notes of patient No. 3 are of further interest as showing that a later administration of exceptionally large doses of potassium iodide and mercury proved the neoplasm to be a syphilitic growth of a somewhat unusual character. The possible method of acquirement is also of interest in this case, as there is every reason to believe that the patient was truthful in denying any knowledge of syphilis. The complaints of a prolonged tonsillar disease, with the history of subsequent sore throat, is suggestive as to the possible point of infection. Tertiary syphilitic deposits of the larynx require more than a moderate dose of potassium iodide before its full benefit is obtained. An ounce or more of this salt in divided doses during the twenty-four hours may be needed. This, of course, necessitates great care, rest in bed, stimulants, hypodermic injections of strychnia, and occasionally hot packs. The resolution of a syphilitic neoplasm and infiltrations may be hastened by the application of a solution containing

Iodine,
Carbolic acid, āā grs. 120.
Potass. iodid. grs. 10.
Spt. rect. ℥ii.

Case 3. T. M. C., aged 37, worker in tobacco, came to the hospital October 10, 1894, complaining of difficult nasal respiration and a slight hoarseness and burning sensations in the throat. His father died at the age of 39 from pulmonary tuberculosis ; his brother at the age of 30 from tuberculosis of the throat, lungs and intestines. The personal history of Mr. C. was excellent. With the exception of an occasional sore throat he had been well until May, 1892, when he began to suffer from pain and soreness in the left tonsil, accompanied by swelling of the anterior cervical glands. The tonsil increased in size until it became so large that it interfered with his breathing and taking nourishment, and had to be removed. About a month after his recovery Mr. C. began to have a dry and burning sensation with some tickling on the left side of his throat near the root of the tongue, especially noticeable during deglutition. These sensations continued

with varying intensity from June 9th to the latter part of August, 1894, when a slight hoarsenesss appeared, and rapidly increased until the tones were of a husky and rasping character. On examination, Mr. C.'s general condition was found to be good. The right ventricular band was thickened, and both cords were also somewhat red and thickened. The anterior two-thirds of the left ventricular band was covered with a pale, yellow nodular mass, as shown in Fig. 3. It passed upwards over the posterior surface of the epiglottis and into the left glosso-epiglottic fossa.

The margin of the neoplasm was distinct, and did not apparently infiltrate the surrounding tissues. Potassium iodide was administered in increasing doses from October 15th to the 26th until five drachms a day were taken without any apparent diminution in the size of the growth. On the 31st of October the potassium was renewed and continued until November 5th, when the dose of the salt had reached one ounce per day. The neoplasm then began to diminish in size. Complete rest was enjoined, and the large dose of potash continued with the addition of ten drops of the tincture of nux vomica three times a day until the 14th, when the potassium was discontinued. The last course of potash, with several applications of solid nitrate of silver and chromic acid, completed the removal of the neoplasm and has left the larynx nearly normal in appearance.

Case 4. William M., aged 69, presented himself at the hospital on the 15th day of October, 1894, complaining of hoarseness and shortness of breath, with difficult respiration and regurgitation of food. Family history negative. He had chewed tobacco for fifty-four years, but had enjoyed perfect health until eight months ago, when his throat began to feel sore, and a spasmodic cough, especially violent at night, soon followed. His physical condition was much impaired, and his loss in weight during the past three months had reached over thirty pounds. He spoke in a hoarse whisper, coughed continuously and expectorated quantities of a glairy, frothy, ill-smelling mucus.

Laryngoscopic examination showed the mucous membrane of the larynx to be very red and covered with mucus; the right cord slightly red and movable, and the left cord perfectly immovable. The left ventricular band was completely covered by a yellow, nodular-looking mass which passed upwards along the laryngeal surface of the epiglottis nearly to its tip, and then into the left glosso-epiglottic fossa. The surrounding tissues were considerably infiltrated, and the anterior cervical glands somewhat enlarged and tender.

He was admitted to the hospital and given potassium iodide until the 31st, when the daily dose had risen to five drachms without any

diminution in the size of the growth; on the contrary, it seemed much more irritable, and several alarming suffocative attacks had occurred during the night.

A small piece of the growth was removed for examination, and proved to he an epithelioma. Tracheotomy was decided upon, and a low operation performed with cocaine as an anæsthetic. He rallied well from the operation and experienced considerable relief. Twenty-four hours later the nurse noticed that there was no respiration through the tube, and an examination showed that the surrounding tissues had become so infiltrated from the traumatic inflammation following the operation, that they had gradually lifted the tube out, and in front of the trachea. Considerable difficulty was experienced in finding the original opening in the trachea, and in reintroducing the tube. This early discovery prevented the formation of the fibrinous exudation which had previously taken place, and no difficulty was experienced in finding the tracheal wound the second time. A specially long tube was now made, and after its introduction no further trouble was experienced. Liquid nourishment was taken without much discomfort, and as there was no occasion for a longer stay in the hospital, he was sent home on the 30th of November.

He has been heard from several times during the past month, and the reports are of easy respiration and deglutition, with a general condition of comparative comfort.

The next case, represented in Fig. 5, has several interesting features. The history, appearance, location, and many of the symptoms of this neoplasm bore a strong resemblance to those of a papilloma of the vocal cords, but on removal the tumor proved to be a hard, fasciculated fibroma. It is difficult to account for the pain experienced by this patient, as it was unusally severe and out of all proportion to the size of the growth.

Case 5. Lena M., aged 35, came to the hospital October 29th, complaining of severe pain in the left side of her throat, especially when she swallowed. Family history negative. Personal history good until one year ago, when after talking considerably she became hoarse. This condition gradually increased until the present time, when she is able to speak only in a hoarse whisper. Two weeks before she went to the hospital she began to have pain in the left side of the larynx, which soon became especially severe on swallowing and at night. A laryngoscopic examination showed the right cord to be normal. On the left cord, at the junction of the anterior and middle third, a small round mass was visible, seemingly growing from the free margin of the cord, and during ordinary respiration standing out

in the rima glottidis, as shown in Figure 5. When the cords were approximated, the neoplasm turned upwards on the superior surface of the left cord. Several vascular points were visible over the surface of the growth even after the appliance of cocaine. At subsequent visits on October 31st, November 5th and 7th, the patient's chief anxiety was to be relieved of the severe pain which she said was increasing rapidly. A 20 per cent. solution of cocaine was applied to the larynx on November 7th, and the growth removed by Mackenzie's antero-posterior laryngeal forceps. The next morning the voice was almost normal in character, and the pains and scratchy sensations in the throat had disappeared. When the patient last visited the hospital, November 30th, it was difficult to tell which vocal cord had been the seat of the growth.

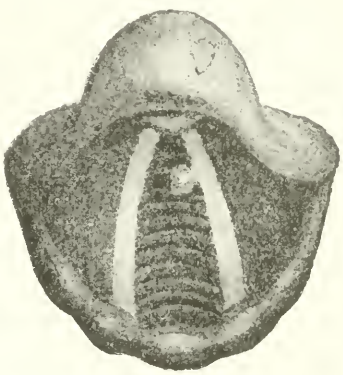

Fig. 5.
Fibroma of the Vocal Cord.

The remarkable tolerance which may be established in the larynx and the oro-pharynx when the encroachment is slow and unaccompanied by pain, is well illustrated in a résumé of some of these cases. Of course much depends on the size, shape and situation of a neoplasm. If the initial development implicates the cords, ventricular bands, or either commissure on a plane with the cords, the voice is at once impaired from their fixation or prevention of coaptation. If the anterior commissure is implicated, the smallest growth may give early evidence of its presence: on the other hand, the upper part of the inter-arytenoid space and the artenoid cartilages will tolerate neoplasms of considerable size. One of the patients recently at the clinic had several large condylomata in the superior part of the inter-arytenoid space, without producing any change in the vocal sound or respiration. Extrinsic parts of the larynx are more tolerant, especially if the growth begins in the upper part of the epiglottis. The tolerance to these

large and numerous growths does not make them less dangerous, as an attack of indigestion, cold, fear, excitement, etc., may result in an attack of suffocation which may prove fatal before medical aid can be obtained. The favorable result obtained by the tracheotomy performed in Case 1 was most gratifying, and in cases of congenital papillomata, attacked with membranous or catarrhal laryngitis, this method gives immediate and permanent benefit.

In laryngeal papillomata in children, if the symptoms are not urgent, considerable success may be expected from endo-laryngeal treatment. The chief difficulty arises from the violent struggles of the child and the quantity of mucus in the throat. I have adopted a method in three children, aged respectively two years, three years and three and a half years, which has enabled me to remove the papillomatous masses with comparatively little trouble. The day before the operation, belladonna is given in small doses and increased until dilatation of the pupils and dryness of the throat are produced. An hour before the operation some preparation of opium, such as paregoric or Dover's powder, is administered until the patient is well under its influence. The resulting condition is more satisfactory for these operations than ether or chloroform anæsthesia, as complete muscular relaxation is not produced, but just sufficient resistance remains to make it an easy matter to hold the child in the upright position. This is done by one assistant, who places the child in O'Dwyer's position for intubation, and holds out the tongue. A second assistant steadies the head and holds the gag. An application of 2 per cent. solution of cocaine is then made, and the child is ready for the introduction of the laryngeal mirror and forceps. There is little difficulty in obtaining a good view of the larynx, as the child is quite passive, and owing to the dryness produced by the belladonna the view will not be obstructed by mucus. The papillomata may readily be grasped and removed in the usual way. Recurrence of papillomata after treatment by the endolaryngeal method is also frequent, as it is after their treatment by thyrotomy, and occasionally after tracheotomy. If once removed, the papillomata are usually several months in recurring, and the older the child, the easier it is to carry out the endolaryngeal treatment. If tracheotomy is per formed, months pass before a favorable termination is reached, and, moreover, it is not always successful. Added to this, there is an element of danger in opening the wind-pipe, and the disfigurement of the neek is also of great moment in some cases. All things considered, it seems that every effort should be made to employ the endolaryngeal method for children ; it is safer, the voice is always left in better condition, and it does not disfigure.

Progress of Medical Science.

Bichromate of Potassium as a Remedy in Gastric Affections.

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NOTWITHSTANDING the assertion made in 1883, and supported by much illustrative evidence, by so high an authority as Vulpian, of the value of bichromate of potassium in the treatment of several forms of gastric affection, this substance has not yet gained a position among the many substances that are used in the treatment of these affections, and but meagre reference is made to it in only a few works on medicine and materia medica. Previously to Vulpian's recommendation it had been used by internal administration as an emetic, and with varying success in syphilitic broncho-pulmonary and nervous disorders; and Drysdale had advocated its employment in affections of nearly all the important organs of the body. Having in 1884 treated with gratifying success a case of persistent gastric disorder by the administration of small doses of bichromate of potassium, I have since that time administered it in a large number of cases. The results have been so favorable that I feel myself justified in now stating my opinion of the therapeutic value of this substance, and in briefly recording a number of the cases of gastric disorder in which it was used by me. With a few exceptions the cases have been those of hospital patients. While such patients gave the best opportunity for determining the effects of medicinal substance, it is not to be overlooked that, in some respects, they are also placed in more favorable conditions for successful treatment than the majority of private patients. In order to simplify the therapeutic problem the medicinal treatment was, as far as possible, limited to the administration of bichromate of potassium. This limitation, however, could not be adhered to in all cases; but only those cases will be described in which the drug alone was administered, or with the addition of other remedies such as purgatives, rendered necessary by the circumstances of the patient, and unlikely to obscure the effects of the chief remedy. I have recorded the cases in two groups—the first group comprehending cases of various forms of dyspepsia unassociated with evidence of gastric ulcer, and the second group cases in which distinctive symptoms of ulcer had been present at some previous time.

GROUP 1.—DYSPEPSIA.

Case 1. A miner, twenty years of age. Symptoms and duration: Anorexia; pain in the stomach fifteen minutes after food, with distension; frequent nausea and occasional vomiting after food, diarrhœa and headache. Tenderness (great) at upper part of epigastrium. These symptoms had been present for five months. Treatment: Milk diet; Oct. 28th, bichromate of potassium ($\frac{1}{10}$ gr.) twice daily till Nov. 13th, and thrice daily till Nov. 20th. Effects and time of production: On Nov. 8th decidedly improved; on 18th on convalescent diet and no symptom present except slight and brief pain after food, but not if patient remained resting. Discharged cured on Nov. 22nd.

Case 2. Domestic servant, twenty-two years of age. Symptoms and duration: Had been dyspeptic for many years, but this attack commenced a month ago. Anorexia, headache, frequent vomiting, pain and tenderness in gastric region, and constipation. Treatment: Oct. 18th, milk diet, cascara extract night and morning, bichromate of potassium ($\frac{1}{10}$ gr.) thrice daily. Effects and time of production: On Oct. 21st much better and no pain after food; on Oct. 24th no tenderness or other symptom; on Oct. 25th on convalescent diet, and on Nov. 1st dismissed, having gained several pounds in weight.

Case 3. Printing machine worker, twenty years of age. Symptoms and duration: Had gastric ulcers when nineteen years of age. Present illness began seven days before admission; epigastric pain on taking food, and vomiting half an hour afterwards, producing relief of pain; great weakness, tenderness on palpation, constipation. Treatment: Oct. 4th, cascara extract, milk diet; Oct. 21st, bichromate of potassium ($\frac{1}{12}$ gr.) thrice daily. Effects and time of production: Before Oct. 21st pain and tenderness were continuous, with occasional vomiting; after bichromate commenced, pain, tenderness, and sickness quickly disappeared, and the patient was dismissed cured on Oct. 29th.

Case 4. Grocer's assistant, fifteen years of age. Symptoms and duration: Severe headache, with nausea and vomiting, for twelve months. Treatment: From Dec. 10th to 18th bismuth, rhubarb and soda; Dec. 18th, bichromate of potassium ($\frac{1}{12}$ gr.) thrice daily. Effects and time of production: Improved considerably from Dec. 10th to 18th, but often had headache, nausea and vomiting; bichromate was then substituted, after which headache and vomiting altogether disappeared, and nausea after food rapidly lessened till he was dismissed cured on Dec. 31st.

Case 5. Coal miner, forty-one years of age. Symptoms and duration: Eight years ago gastralgia, lasting for a year; one year ago

gastralgia for one month; one month ago present illness, consisting of sensations of weight and pain in stomach about an hour after food, eructations, vomiting every two or three days, epigastric tenderness and constipation. Treatment: From Jan. 7th to Jan. 12th exalgin; Jan. 12th, bichromate of potassium ($\frac{1}{12}$ gr.) thrice daily. Effects and time of production: No improvement till Jan. 12th; subsequently considerable alleviation, and ultimately disappearance of vomiting. The patient was dismissed, much improved, on Jan. 19th.

Case. 6. A young woman, twenty-three years of age. Symptoms and duration: Had been dyspeptic for years. On admission suffered from flatulence, epigastric pain and tenderness, and occasional vomiting, which had all been present in severe form for four months. Treatment: From Feb. 24th to March 7th, extract of cascara; from March 7th to 16th, bichromate of potassium ($\frac{1}{12}$ gr.) thrice daily. Effects and time of production: Improved to March 7th, but still tenderness, flatulence, and pain after food; dismissed, cured, on March 17th.

Case 7. A brass-finisher, nineteen years of age. Symptoms and duration: For several months pain immediately after food, lasting for about an hour, flatulent distension, epigastric tenderness, and some enlargement of stomach; patient had also presystolic mitral disease. Treatment: March 10th, bichromate of potassium ($\frac{1}{12}$ gr.) thrice daily. Effects and time of production: On March 18th no pain after food, flatulence, or epigastric tenderness. There were no further gastric symptoms, although patient was kept in hospital till April 5th because of the cardiac disease.

Case. 8. A woman, a lithographer, twenty years of age. Symptoms and duration: For four months anorexia, discomfort, nausea, pain and vomiting after food; slight anæmia; constipation. Treatment: From Feb. 11th to March 3rd cascara, cod-liver oil, and ferrous chloride; March 3rd, bichromate of potassium ($\frac{1}{12}$ gr.) thrice daily. Effects and time of production: The anæmia soon disappeared. The gastric symptoms persisting, bichromate was administered. The dyspepsia improved; until in five days fish and chicken were taken without any discomfort; and she was dismissed, cured, a few days afterwards.

Case 9. A printer, fifty years of age. Symptoms and duration: For a year epigastric pain and tenderness, nausea and vomiting after food, flatulence, constipation; also suffers from aortic stenosis, and had an alcoholic history. Treatment: From Oct. 28th to Nov. 4th calomel and compound jalap powder at first, and then compound tincture of cardamon; from Nov. 4th to 10th bichromate of potas-

sium ($\frac{1}{12}$ gr.) thrice daily. Effects and time of production: No distinct improvement evident till Nov. 6th, when, for the first time, no pain or nausea. On the 14th no symptom of gastric disorder. Dismissed, cured, on Nov. 16th.

Case 10. A woman twenty-five years of age, a worker in an india-rubber manufactory. Symptoms and duration: For two years dyspeptic symptoms, sometimes severe. On admission anorexia, thirst, gastric pain and tenderness, occasional vomiting, acid eructations after food, flatulent, distension and constipation. Treatment: On Dec. 11th bichromate of potassium ($\frac{1}{12}$ gr.), increased to $\frac{1}{8}$ gr. on Dec. 16th; liquid extract of cascara for several days. Effects and time of production: In five days after beginning the bichromate of patassium eructation and gastric pains had disappeared, and in ten days epigastric tenderness could not be elicited. Patient was dismissed, while taking light diet without discomfort, on Jan. 3rd.

Group 2.—Gastric Ulcers.

Case 1. A domestic servant, twenty-seven years of age. Symptoms and duration: Three years and three months ago pain half an hour after food, lasting about an hour and a half, and flatulence. Soon vomiting, the matters later containing blood, but not for some months past; headache and constipation. Symptoms and weakness more urgent latterly. Treatment: April 13th, bichromate of potassium ($\frac{1}{10}$ gr.) thrice daily; Carlsbad salts every morning; milk diet. Effects and time of production: On April 25th no longer any nausea or vomiting, and pain after food less severe and of shorter duration. On May 8th all gastric symptoms had disappeared and light diet was taken. She remained in hospital for another fortnight, and when dismissed was taking almost ordinary diet, and had gained one stone in weight.

Case 2. A nursery maid, aged twenty-seven. Symptoms and duration: Dyspepsia for several years. Two years ago persistent pain in stomach, much increased by food, nausea, frequent vomiting, containing blood a year ago, constipation and feebleness. On admission above symptoms with epigastric tenderness, flatulent distension, and acid eructations. Treatment: March 14th, bichromate of potassium ($\frac{1}{10}$ gr.) twice daily, Carlsbad salts each morning until March 30th. Subsequently, also aloes and iron pills. Effects and time of production: Vomiting, which before treatment occurred in hospital daily, and frequently several times a day, became less frequent and ceased on March 26th. The patient was dismissed cured on April 9th.

Case 3. A domestic servant, aged twenty-five. Symptoms and duration: Eight, and also three, years ago had been severely ill with gastric symptoms; six weeks before admission pain and sickness occurred; and a fortnight before admission the patient began to vomit after every meal, the vomited matter frequently containing blood. In addition suffered from anorexia, constipation, and epigastric tenderness. Treatment: June 20th, extract of cascara nightly, and bichromate of potassium ($\frac{1}{12}$ gr.) thrice daily. Effects and time of production: Vomiting last occurred on June 24th, but nausea, especially after meals, continued until the 26th. Pain and tenderness had disappeared on June 30th. Patient was dismissed, free from gastric symptoms, on July 4th.

Case 4. A woman thirty-two years of age, a mill-worker. Symptoms and duration: About fifteen months before admission abdominal pain with distension and eructations, followed by frequent vomiting, containing blood, three months before admission, great pain in epigastrium and thorax, epigastric tenderness, and constipation. In addition to above considerable enlargement of the stomach was found to be present. Treatment: From Jan. 26th to Feb. 5th assafœtida, cardamoms, and cascara. On Feb. 6th bichromate of potassium ($\frac{1}{12}$ gr.) thrice daily. Subsequently, ferrous chloride. Effects and time of production: Rapid improvement, so that on Feb. 12th no gastric symptoms were present except occasional slight epigastric pain. This last symptom disappeared in a few days, and patient was dismissed, cured, on March 3rd.

Case 5. A woman aged twenty, a cook. Symptoms and duration: For several years flatulence and eructations after food. Six months before admission began to vomit occasionally, and one month before admission frequently, with blood in vomited matter; also constant epigastric pain increased by food, nausea, anorexia, constipation, and epigastric tenderness; patient likewise suffered from molluscum fibrosum. Treatment: From Jan. 10th to 17th bismuth, rhubarb and soda. Jan. 17th, bichromate of potassium ($\frac{1}{12}$ gr.) thrice daily. Milk diet until Jan. 24th. Effects and time of production: On Jan. 20th distinct improvement, but epigastric tenderness was still preesnt. On January 24th all gastric symptoms were absent, and milk diet was departed from.

Case 6. A woman aged twenty, a professional dancer. Symptoms and duration: Had vomiting of blood a year before admission. Three weeks before admission fainted several times, and vomited a little blood; since then she had vomited several times daily, without blood, about two hours after food; suffered from epigastric pain after food,

constipation, and considerable epigastric tenderness. Treatment: From Jan. 13th to 17th bismuth, rhubarb and soda; but pain and vomiting were not removed. From Jan. 17th to Feb. 21st bichromate of potassium ($\frac{1}{12}$ gr.) thrice daily. Again, from March 3rd to 24th bichromate in above doses. Effects and time of production: On Jan. 18th no pain, vomiting, or nausea. On Feb. 27th (bichromate had been stopped on Feb. 21st) a recurrence of pain, nausea and vomiting. From March 5th to March 24th no symptoms of gastric disorder (bichromate was again being taken). Patient was dismissed, free from gastric symptoms, on March 24th.

Case 7. A laborer thirty-seven years of age, employed in a brewery. Symptoms and duration: Gastric pain and vomiting at intervals for eight years. Present attack about ten days before admission; great gastric pain and vomiting after food, the vomited matter containing blood; flatulence, acid eructation, constipation, and epigastric tenderness. After admission all above were present except vomiting. Treatment: From March 5th to 11th bismuth, rhubarb and soda; from March 11th to 30th bichromate of potassium ($\frac{1}{12}$ gr.) thrice daily. Effects and time of production: Some slight temporary relief of pain between March 7th and 11th. On March 13th pain greatly lessened; and all pain, tenderness and nausea had disappeared on March 18th. Patient was put on convalescent diet on March 19th. On the 21st and 22nd there was slight pain for a short time which did not recur, and patient was dismissed on March 30th entirely free from pain, nausea or epigastric tenderness.

Case 8. A woman twenty-nine years of age, a cook. Symptoms and duration: A month before admission hæmatemesis with tarry ejections. On admission thirst, moderate constipation, epigastric pain increased by food, epigastric tenderness, and anæmia. No vomiting after admission. Treatment: Oct. 14th, extract of cascara each night; Oct. 20th, bichromate of potassium ($\frac{1}{12}$ gr.) thrice daily till Nov. 12th; milk diet till Oct. 21st; afterwards gradually increased to convalescent diet, and on Nov. 8th to full diet. Effects and time of production: On Oct. 24th all stomach pain had disappeared. On Nov. 1st no epigastric tenderness was present.

Case 9. A woman forty-seven years of age, a cook. Symptoms and duration: About five years ago vomiting after food, from which she recovered. Four months before admission vomiting recurred, with severe gastric pain following food, and blood was present on more than one occasion. Patient was very feeble, there was epigastric tenderness, and the stomach was moderately enlarged, and a hard, small mass could be felt near the pyloric extremity. Treatment:

June 20th, bichromate of potassium ($\frac{1}{8}$ gr., increased on the 25th to $\frac{1}{6}$ gr.) thrice daily; milk diet from June 14th till July 24th. Effects and time of production: Vomited thrice on June 20th, and daily till June 24th. Since this date there has been no further vomiting or pain. On July 9th epigastric tenderness had disappeared. She was able to eat white flesh without discomfort before her dismissal on Aug. 3rd, when she had gained seventeen pounds in weight.

Case 10. A married woman thirty-five years of age. Symptoms and duration: About nine months before admission pain, nausea, and vomiting after food. Recovered in about six weeks. Symptoms returned in more severe form two months before admission. Pain came on chiefly an hour after food, even diluted milk, and was followed by nausea and vomiting. Since admission blood was present on two occasions. There was also much epigastric tenderness and constipation. Treatment: May 7th, bichromate of potassium ($\frac{1}{6}$ gr.) thrice daily. Milk diet till May 21st; gradually improved to convalescent diet. Effects and time of production: Vomiting, which previously occurred daily, ceased on May 13th until May 22nd, when one attack of vomiting occurred, but without pain. From this time improvement was continued without interruption; appetite, strength, and weight were recovered, and gastric symptoms were entirely absent when she left hospital on June 2nd.

While the doses administered in the above cases have varied from $\frac{1}{12}$ gr. to $\frac{1}{6}$ gr. (from 0.005 to 0.01 gramme) thrice daily, it will be observed that in the greatest number of the cases the smallest of these doses was administered, and was found sufficient. The dose should be given during fasting and in as empty a condition of the stomach as possible. The administration was effected in the form of pill or solution: and no difficulty was experienced by the patient in the taking of a simple solution in water, although occasionally, and especially with the larger doses, flavoring agents were added, such as syrup of tolu or of orange. An examination of these records shows that bichromate of potassium is capable of relieving, and often in a short time of removing, the entire group of symptoms—if we except constipation and anæmia—encountered in dyspepsia, and especially pain, nausea, vomiting, and gastric tenderness. Taking into account the supposed relationship between disorders of the alimentary canal and anæmia, it might by some have been expected that an agent which is decidedly curative in dyspepsia would, at the same time, exert a curative influence in anæmia. Several of my cases, however, have shown that this is not so, and have thus given evidence that the therapeutic benefit is the result of an action restricted to the stomach. One case in particular

serves to illustrate this. On Oct. 12th, when treatment of bichromate of potassium was commenced, an examination of the blood showed that the hæmocytes numbered 4,300,000, and that the hæmoglobin amounted to 40 per cent. All gastric symptoms had disappeared on Oct. 21st, when the hæmocytes numbered 4,100,000, and the hæmoglobin amounted to 38 per cent. Bichromate of potassium was continued until Nov. 16th, and even then, although the patient had for some time been eating well and had gained weight, the hæmocytes numbered 3,700,000 and the hæmoglobin amounted to 52 per cent. On this date ferrous chloride was substituted for bichromate of potassium, and on Nov. 25th the hæmocytes numbered 5,000,000 and the hæmoglobin amounted to 79 per cent.

In a few cases of acute gastric ulceration with hæmatemesis in which I have given bichromate of potassium the results were not favorable, as it did not succeed in checking the bleeding. Indeed, I find that its astringent action is very slight, for a solution of egg albumen, which was rendered hazy by a 0.01 per cent. solution of nitrate of silver, was not distinctly changed by a 3 per cent. solution of bichromate of potassium, and was rendered only slightly hazy by a 4 per cent. solution. At the same time bichromate of potassium possesses a strong anti-putrefactive power, which is exhibited in albuminous, saccharine, and phosphatic urines, even with a 0.01 per cent. solution. This action probably constitutes one of the causes of its anti-dyspeptic therapeutical value, but there are undoubtedly other causes, such as a direct or indirect analgesic action, and probably a selective action on the nutrition or function of certain histological structures, which I am now engaged in endeavoring to determine.—*The Lancet.*

Myositis Ossificans.—N. Senn, M.D., Ph.D., in Columbus *Medical Journal*, gives the result of his examination of an excellent example of this disease in Trinity College, Dublin. This case makes it quite clear that the ossification does not begin in the muscles. The new formation of bone clearly begins from the periosteum, and extends along the course of the muscle till it reaches the point of its insertion. As the process becomes complete the muscles disappear, and limbs become rigid and immovable. Thus muscles that arise from the pelvis and are inserted in the femur become replaced by bone, and destroy the mobility of the hip-joint. In like manner the knee and elbow, or any other joint, becomes surrounded with immovable and useless bridges of bone.

Taka Diastase.

BY FERDINAND LASCAR, PH.GR.,
Pathologist to the Demilt Dispensary, Etc.

In the human system a continued waste takes place which it is necessary to provide for, and to this end man partakes of food which must contain the elements for this purpose. To bring such food products into proper form, so that they can be assimilated and taken up in the system, the digestive organs perform their functions, and these are of a mechanical and chemical order. The food needed is both animal and vegetable in nature, the latter forming by far the greater and more important part. It can truly be said that upon the proper digestion of his food, man's health, happiness and very life depend, and progressive science has fully demonstrated the unerring truth of this. Any irregularity or fault in the process of digestion very soon becomes manifest, and dyspepsia, malnutrition, and ill health follow. As the food man partakes is twofold, so is the process of digestion a twofold one, animal and nitrogenous foods needing an acid, while vegetable, starchy foods need an alkaline process to bring them into soluble form ready for assimilation. The general idea about faulty digestion is that the stomach performs its duty improperly. While this, in very many instances, is undoubtedly so, the fact is, nevertheless, that in the greater number of cases of impaired digestion improperly performed processes of other organs are at the bottom of the evil in failing to properly convert the starchy food partaken of.

The changing of amylaceous food into dextrose and maltose is the beginning of digestion. All will have observed that bread, crackers, or potatoes, not being sweet in themselves, very soon become so when masticated and thoroughly mixed with the saliva in the mouth, and that their taste becomes sweeter the longer this is continued. This sweet taste is due to the conversion of the hydrated starch by the action of the saliva upon it, the saliva containing an enzyme called ptyalin, which, by its presence, splits up the starch into soluble products which I will mention later on, and this splitting-up process of the starchy food even continues after it has left the stomach. Animal foods needing the acids which are found in the stomach are digested there, but acids materially interfere with the action of enzymes which cause the conversion of starch, even destroying such action altogether. For this reason it seems practically incorrect to say that the conversion of starch continues after it leaves the mouth; but nature has provided against a too soon interference of acids, because it is now well under-

stood that acid, especially hydrochloric acid, is secreted in the stomach a considerable time after the food has arrived there, and this may be one of the reasons why the converting of starch continues after it has left the mouth.

Since medical science has thoroughly grasped the philosophy of digestion, it has been the aim by artificial means to supply the enzymes which digestion calls for when they do not appear to be present in a sufficient quantity or are secreted in less potent form by the digestive organs. Science has succeeded fairly well in supplying gastric and pancreatic ferments when nature lags behind; but our success has so far been only a very partial one in supplying starch-converting substances, and for this reason a new and seemingly valuable discovery in this direction at once becomes interesting.

That diastase has an identical action with ptyalin upon starch is a fact long known, and for this reason the diastase contained in malt has been employed for this purpose. Diastase is contained to a lesser or greater extent in the different extracts of malt, and in minute quantities also in fermented malt preparations. In the latter the diastatic action, however, is generally totally destroyed by the acids present. Even in the best extract of malt there is only a limited and variable amount of diastase present; and while the extract of malt will continue to play an important role as a dietetic agent, its utility as a starch converting agent will always remain a limited one. From time to time pure diastase has been offered to the profession, but none has so far proved of a sufficient potency to recommend itself to general use. Great progress in this direction is the discovery of Mr. Takamine, a chemist of no mean ability, who acted as one of the commissioners of Japan at the Cotton Exhibition in New Orleans several years ago. At that time he showed me an extract of malt, as manufactured in Japan, very rich in diastase and nutritive properties, and which I have mentioned in a paper on the diastatic and nutritive properties of malt extracts, published in the December number, 1891, of the *Epitome of Medicine.* In that paper I warned against too great heat in the manufacture of malt extracts, as heat impairs, and is even liable to totally destroy, the diastatic action. The avoiding of all undue heat in preparing diastase may be one of the reasons why the diastase which is now manufactured by Parke, Davis & Co., under Mr. Takamine's discoveries, is so perfect in its action in converting starch into maltose and dextrose. His product is a dry powder similar in appearance to some I received from a reputable German firm years ago, but is vastly superior in potency. Since the receipt of this German preparation I have had occasion to experiment with various diastases, some being

named vegetable ptyalin, but in no instance have they come up to the desired standard, and failed to fill the void felt for an enzyme which will accomplish what the enzyme of saliva in a healthy individual does accomplish.

In comparing notes of experiments lately conducted with taka diastase, other available diastases and different extracts of malt, I find that the claim of the taka diastase that it will convert a hundred times its own weight of starch into a soluble state is well authenticated, for I have succeeded in converting even fifty per cent. more of starch than is claimed for it. Another point in favor of taka diastase above other similar products is the quickness of its action upon starch, for the action is almost instantaneous. To convert one hundred parts of starch into a soluble state by the action of one part of taka diastase, under proper conditions, it takes only four minutes until neither iodine test nor the microscope can detect unconverted starch. The product of converted starch with Mr. Takamine's taka diastase is to a great extent maltose. Compared with the time required by the best extract of malt to convert starch, this is certainly an excellent showing, for it took the best malt extract between seven and eight minutes to convert its own weight of starch into a soluble state, while with some other extracts of malt it took fifteen, twenty, and thirty minutes to partially accomplish this end. Tests with Fehling's solution to ascertain in the converted starch products the amount of contained sugar therein were equally favorable to taka diastase.

In converting starch into a soluble state by the action of diastase, the rearranging of the molecules of starch is understood to be as follows:

Starch $(C_{12}H_{20}O_{10})$ 10 plus water, H_2O, are first formed into erythro-dextrose and maltose.

$$(C_{12}H_{20}O_{10})_9 \text{ and } C_{12}H_{22}O_{11}$$

By the continued action of diastase further hydration of the erythro-dextrose takes place.

The erythro-dextrose further splits up into erythro-dextrous-β and maltose, the ultimate result being a small amount of dextrin (anchro-dextrose) and eight or nine equivalents of maltose. Since Leuch's discovery of the specific starch-converting property of saliva and its pytaline, we have lacked an agent of sufficient potency to accomplish what good healthy saliva does, and, for the first time, we find in taka diastase a substitute of undoubted worth, which, even in the presence of a minute quantity of acid, does not cease to be potent. The ptyaline in saliva is present there in a neutral or weak alkaline state, and for

this reason it suggests itself that diastase, being an analogue with the former, acts also at its best in such a state, and is incompatible with acids. I employed in the greater number of my experiments with diastase fully washed arrow-root—a perfectly bland and neutral starch; but I found that starches giving a slight acid reaction on blue litmus were equally well converted by taka diastase. In testing diastase as to its potency, I would recommend that the iodine as well as the copper tests be employed, and that undue employment of heat under all circumstances should be guarded against, as heat, as already mentioned, destroys the action of diastase.

Taka diastase being a dry powder, tasteless, and of no perceptible odor, can be given in very small bulk, and for this reason I think it will prove itself of value in infant feeding, where it is desirable to give starch-containing foods, provided said food would easily dissolve and the infant's saliva could be relied upon to perform that function. That the new diastase is destined to become a favorite with the profession I have no doubt, having acquainted myself with its potency in converting starch in a minimum of time into a form ready for absorption by the system, and I think it will be found the very remedy for which we have waited so long.—*Therapeutic Gazette*, July 15th, 1895.

The Dilating-Bag in Placenta Prævia.—The use of the Champetier de Ribes dilating-bag in placenta prævia is well discussed by Dr. Shaw in the *British Gynæcological Journal*. He says: "With regard to the employment of the dilating-bag, the first thing to notice is the great importance of antiseptic precautions. The vagina must be well douched with a perchloride solution, 1:2000, and the interior of the cervix also, if this is filled with a clot. On the completion of the third stage the uterus must be well washed out with the same solution. Secondly, it is important to notice that, when labor has actually begun, the bag must be introduced only in the intervals between the pains, and that it is to be passed in the direction in which membranes can be most easily reached. It is interesting to note that from the moment of introduction of the bag there was, in the two cases noted, no fresh hemorrhage. In addition to this advantage, the placenta is pushed over in the direction in which the uterus is being expanded by its contractions, so that the placenta is actually less severed from its uterine attachments. Its drawbacks are that in case of head presentation the bag is very likely to displace it to one side, and the interval between the introduction of the bag and the commencement of labor is sometimes considerable."—*Medicine*.

Nephropexy by Living Tendon.—M. Poullet has reported a successful case in which a tendon of the longissimus dorsi muscle was detached at its upper end from its muscular belly and passed so as to make a loop through the posterior part of the capsule of the kidney, thus supporting and holding the kidney in its proper place. This is probably the first case of the kind where a living suture was used.—*Boston Medical and Surgical Journal.*

Uterine Flatus.—According to the *Medical Press and Circular*, July 26th, an interesting instance of "phantom tumor" of the uterus, due to tympanites of that organ, has been reported by Dr. Lichtenstein, of Liegnitz. On account of a chronic metritis, a patient was successfully treated by tamponment with iodoform gauze. A considerable time afterward she suffered from violent pains in the abdomen. On examination, the abdomen was found much distended, and the uterus three finger breadths above the umbilicus. On examining with the sound it passed into a large empty cavity, and air escaped out of the uterus with a distinct pop. The patient was frequently troubled in this way, the uterine tympany always coming on when the stomach or bowels were disordered. A few days after the attack described there was still pain at the side of the uterus. Massage, rhubarb and charcoal still further improved the condition.—*Boston Medical and Surgical Reporter.*

Peptonuria.—Senator (*Deutsche Med. Woch.*) distinguishes three forms of peptonuria: the *pyogenic*, dependent upon absorption of large quantities of pus; the *hepatogenous*, which is most pronounced in acute atrophy of the liver; and *enterogenous*, associated with ulcerations of the intestine in which the peptone is derived from disintegrating pus on the ulcerated surface, or the diseased intestinal wall is unable to reconvert the peptone into albumen. Peptonuria occurring in severe cases of poisoning, diseases of the blood, etc., he would explain on the theory of a general histological change to which may be applied the term *histogenous* or *hæmatogenous*. He points out that some cases of peptonuria may have their origin in the kidneys, the bladder, or even, after the urine is voided by changes in the contained albumen due to the action of ferments. Later examinations show that the term "peptonuria" is incorrectly applied to these substances, as they are only modified albumens. The clinical importance of peptonuria has been lessened by the uncertainty and difficulty of its

recognition. Recently Salkowski has described a method which enables us to certainly recognize peptone: To 20 to 50 cc. of urine, freed from albumen. is first added a small quantity of hydrochloric acid, then phosphomolybdic acid; the precipitate, after being warmed and washed, is redissolved by the addition of dilute solution of sodic hydrate, and heated until it assumes a yellow color; after cooling, the ordinary biuret reaction is employed. With this method Senator has detected many cases of peptonuria, and has determined the presence of peptone in pneumonia just before and after the crisis, in peritonitis, in empyema, and in supperative meningitis. Especially in this last condition ought the method to be of great value. In one case of old middle-ear disease with symptoms of meningitis no peptone was found, and operation showed a cholesteatoma.—*Medicine.*

A New Medical Application of Electricity.—The researches of D'Arsonval in physiological electricity have borne fruit in a new application of electricity to medicine, as described in a paper read by Dr. Apostoli before the British Medical Association at its recent meeting: "The current of high frequency and high potential is caused to traverse a large helix inside which the patient is placed; and the effect is to set up induction currents of a similar kind inside the patient's body. These travel in-closed circuits through the tissues and produce nutritive changes, which can be recognized by their effect in increasing the elimination of carbon dioxide and of urea. The actual figures are promised at an early date. The results are good in diseases characterized by failure or impairment of nutrition, and accordingly Dr. Apostoli reports successes in anæmia and debility, gout, rheumatism, neurasthenia, and hysteria. In diabetes, also, there have been some favorable cases. The principle of the localized application of electricity for the relief of disease, so ably insisted upon by Duchenne, has delayed the recognition of the important general effects to be obtained from electrical treatment. At present there is a distinct movement in favor of general electrification as a theraputic means, and the results appear to be almost identical in character, whether the method employed be by the alternate current electric bath, advocated by Gautier and Laret, or the high potential induction method of D'Arsonval and Apostoli, or the electrostatic methods favored by Vigouroux and Morton of New York, who used the Wimshurst or some similar machine as the source of the electricity applied."—*The Lancet.*

Society Reports.

The American Electro-Therapeutic Association.

THE fifth annual meeting was held in Toronto, in the Council Chamber of the College of Physicians and Surgeons, on September 3rd and 4th. A most interesting and very handsome exhibition of electrical apparatus, etc., occupied the reception hall adjoining, both rooms being very tastefully decorated for the occasion with palms, ferns and other plants, and cut flowers, the dais in the meeting room being transformed into a veritable bower. The firms represented were: H. W. Johns, Edison, Galvano-Faradic, Jerome Kidder and Waite & Bartlett companies, of New York; McIntosh Battery and Optical Co., of Chicago; and Parke, Davis & Co., Detroit.

The attendance was rather below expectations, partly due, doubtless, to the earliness of the season and the consequent disinclination of members to leave their summer resorts, but many letters and telegrams testified that sickness was also a cause of detention.

Members were present from New York, Boston, St. Louis, Washington, Reading, Melrose, Ann Arbor, Auburn, Montreal and Toronto.

The chair was taken at 10.30 a.m. by the President, Dr. A. L. Smith, of Montreal. Dr. Thorburn delivered a most felicitous address of welcome, during which he took occasion to deplore the scant knowledge of electricity possessed by the general practitioner. Dr. C. R. Dickson, as chairman of the Committee of Arrangements, also welcomed the visitors. Letters and telegrams of regret were then read.

Dr. Berryman, of St. John, N.B., and Dr. Harrison, of Selkirk, guests of the Association, were asked to take seats on the platform.

Drs. Thomas Charlton, Savannah, Ga.; Wendel C. Phillips and Max Einhorn, New York; F. W. Ross, Elmira; H. W. Gillet, Newport, R.I.; and John Gerin, Auburn, N.Y., were elected Active Fellows, and Mr. J. A. Cabot, Chief Electrician of the Board of Administration of Cincinnati, O., an Associate Fellow.

The report of the Standing Committee on Induction Coils and Alternators (Dr. A. H. Goelet, New York, chairman) was presented by Dr. C. R. Dickson.

The report of the Standing Committee on Electrodes (Dr. C. R. Dickson, Toronto, chairman) was also read by Dr. Dickson.

The following papers were then read: "The General Therapeutic Effect of the Alternating Current of High Frequency and of High Tension," by Dr. Georges Apostoli, Paris; "Zinc Amalgam Cataphoresis,"

by Dr. G. Betton Massey, Philadelphia; "Some Comments on Cataphoresis in Throat and Dental Disease, with the Exhibition of an Improved Current Adapter," by Dr. W. C. Phillips, New York; "Electricity as a Means of Diagnosis in Gynæcology," by Dr. Georges Apostoli, Paris; "Faradism in Obstetrics," by Dr. R. J. Nunn, Savannah, Ga., "Soluble Electrodes," by Drs. Gautier and Larat, Paris; "The Physiological Action of Periodic Induced Currents in Gynæcology," by Dr. A. H. Goelet, New York; "Notes on the Use of the Continuous Current in Arthritis Deformans," by Dr. H. S. Jewett, Dayton, O.; "Electricity in the Excessive Vomiting of Pregnancy," by Dr. Gautier, Paris.

On Wednesday morning the President gave his address, taking a very practical subject, "Electro-Therapeutics in General Practice." The following papers were then presented: "Some Experiments in Static Electricity in Functional Diseases of the Nervous System," by Dr. Francis W. Bishop, Washington, D.C. Dr. W. J. Herdman, of Ann Arbor, then read his report of the Standing Committee on Constant Current Generators and Controllers. Dr. Bishop, Washington, presented a new Uterine Electrode. Dr. C. R. Dickson, of Toronto, gave a report on the "Electrolysis of Cystic Goitres." "Hydro-Galvanism of the Urethra," and "Gautier's Method of Electrolysis in Urethral Stricture," were read by Dr. Robert Newman, New York. Dr. W. J. Herdman, Ann Arbor, presented a paper on "Alternating Dynamo Currents in Therapeutics." "A New Method of Heating Large Cautery Irons by Electricity," by Dr. Scheppegrell, of New Orleans, concluded the programme.

The discussion of the papers and reports was very spirited. A marked feature was the throwing open of all discussion, a compliment much appreciated and quite generally taken advantage of by many of the Toronto physicians, who evinced much interest in the proceedings.

The reports of the Secretary and Treasurer were presented.

Votes of thanks were passed to the exhibiting manufacturers who had so largely assisted the Association in its technical deliberations; the Medical Council, and Ontario Medical Library, for the use of meeting and exhibition rooms; Toronto Railway Company, President Industrial Fair, Toronto Atheltic Club, and the medical profession of Toronto, for courtesies extended; and to the retiring president and secretary.

Boston was chosen as the next place of meeting. Dr. Robert Newman, of New York, was elected President; Dr. H. Walker, Toronto, Dr. Beaver, Reading, Vice-Presidents; Dr. E. Heuel, New York, was re-elected Secretary, and Dr. R. J. Nunn, Savannah, Ga., re-elected

Treasurer; and Drs. Herdman, Morton, Goelet, Massey and Heuel were elected as Executive Council.

The entertainment feature was well provided for, and reflected great credit on the indefatigable Chairman of Arrangements, Dr. C. R. Dickson.

On Tuesday evening the Association were the guests of the Toronto Railway Company. The handsome private car of the President called at headquarters—the Rossin House—at 8 p.m., and took on board a party of members and ladies. Under the supervision of Head Road-master Nix, the fine power house was first visited and inspected, then a tour of the city was made, and a run into Rosedale. On the return, as the car neared the bridge the lights were put out and the car slowed in order to get the best effects of a magnificent moon directly over "the ravine." The visitors were very much struck with the grandeur of this scene. The hotel was reached at 9.30, as many had expressed a desire to retire early, being travel-tired.

On Wednesday evening, the privileges of the Toronto Athletic Club having been most kindly extended to the Association, the members of the medical profession in Toronto held a reception there, which was very enjoyable. The Ladies' Committee of the Club made most charming hostesses. After opportunity had been afforded to inspect the building, a delightful promenade concert was held in the gymnasium, the vocal soloists being Miss Maggie Huston, Dr. Crawford Scadding and Mr. Glen Meek (New York); Miss Franziska Heinrich contributed two piano solos; Mr. Heinrich Telgmann gave two violin solos and also an obligato; Mrs. Irving Cameron and Miss Heinrich were the accompanists. A most finished performance was given. Light refreshments were served in the dining-room after the concert.

On Thursday afternoon the members visited the Industrial Fair as the guests of its President. Photographs of the balloon ascension and parachute drop were taken on the way out. After an enjoyable leisurely tour of the main buildings, the members were introduced to President Withrow by Dr. Dickson, and had supper with the directors. The party then occupied seats in the grand-stand, and bestowed many well-deserved compliments on a management possessing such beautiful, well-equipped grounds, and capable of presenting such a magnificent evening entertainment.

At a recent meeting of the trustees of Jefferson Medical College, Philadelphia, the honorary degree of LL.D. was conferred on Dr. John Collins Warren, Professor of Surgery in Harvard University.

Editorials.

Uniformity in Electrical Connections.

General practitioners will note with interest the result of the work of the Standing Committee on Electrodes of the American Electro-Therapeutic Association, as evidenced by its report at the recent meeting. The chairman, Dr. C. R. Dickson, of Toronto, was able to advise the Association that the leading manufacturers of electrical apparatus had agreed to accept the recommendation of the committee, and adopt a uniform means of connecting electrodes with batteries; said universal uniform connector to be decided upon by the committee. To the uninitiated we may explain that this means that in future the instruments made by one firm can be used with batteries from the factories of any other reputable manufacturer. One of the most celebrated continental manufacturers agreed to conform, provided the metric system was used in measurement. Dr. Dickson is certainly to be congratulated upon the result of his year's work in conjunction with his committee. A satisfactory form of connector has been adopted, and when the samples have been made they will be forwarded to all manufacturers. The construction of electrodes and of conducting cords will next receive the attention of the committee.

Lodge Practice in London.

We append the agreement which, at the moment of going to press, forty-one of the forty-six physicians in London have signed. We sincerely hope that the remaining five will also sign. In a movement of this kind, there is the fear that some medical man may move to the place to catch the practice of the societies thus thrown open. But surely no member of the profession worthy of the name will do so in the case of London or any other city. One would think that a medical practitioner who would thus run against his confreres would not have an enviable position. In the *London Daily Free Press* of 18th October there appeared a letter signed by the three representatives to the Council—Drs. Roome, Moorhouse and C. T. Campbell, in which the evils of lodge practice are clearly set forth. The Medical Review has always declared against lodge and contract practice, and will always be glad to aid any movement to correct the evils of the system.

Copy of Agreement *re* Lodge Practice:

"We, the undersigned medical practitioners of the city of London, severally covenant and agree each with the other that on

and after the 1st day of January, 1896, we will not engage in or contract our services for lodge or club practice.

"And we do hereby severally covenant and agree each with the other that any party to this agreement who violates the same will subject himself to the payment of the sum of sixty dollars as liquidated and ascertained damages for such breach, and that the said sum may be sued for in the name or names of one or more of the other parties to this agreement in the First Division Court of the county of Middlesex, the jurisdiction of which court we hereby admit and consent to, and that upon any sum being recovered in such action the same shall be applied to whatever object a majority of the parties to this agreement may decide upon.

"It is further agreed and understood that this agreement shall not be binding until it is signed by all the medical practitioners in the city of London."

Toronto University Senate Elections.—The voting resulted as follows: Dr. J. E. Graham, 462; Dr. A. H. Wright, 454; Dr. L. McFarlane, 405; Mr. Cameron, 377; Dr. W. H. B. Aikins, 361.

Bichromate of Potassium as a Remedy in Gastric Affections. —Dr T. R. Fraser, of Edinburgh, contributed a paper on this subject to the recent Medical Congress, and cited a number of cases where marked results were obtained by the use of this therapeutic agent. Other clinicians have prescribed this drug with advantage, and it has been thought well to reproduce Dr. Fraser's article as it orginally appeared in the *Lancet*.

Hypodermic Use of Ammonia.—H. Morell, M.D., C.M., in New York *Medical Journal* of September 7th, claims good results from the hypodermic use of ammonia in capillary bronchitis and bronchopneumonia. Energetic treatment is required to counteract some of the severe symptoms that arise from these diseases, especially the deficient aeration of the blood. The aromatic spirits was used. Of this, from fifteen drops to two drachms, according to age, was injected. The action is very prompt. There is some smarting, but it soon passes off, and the child does not seem to mind it much. The face loses its livid color, the pulse beats stronger, and the respiration is deeper. The frequency of the injections varies. When the symptoms of collapse appear, the injections should be given every hour until the breathing is easier and the heart becomes stronger.

Digitalis in the Failing Heart.—Dr. Horatio Wood, in speaking of the use of digitalis, says that in the failing heart the coronary artery gets little or no blood ; at the very time when the heart is being overworked and overworried it is starving. But when the great wave of digitalis action comes, it swells out the aorta, it fills the coronary artery, it goes into every part of the heart, it brings sustenance and food, and the old effete material that has been clogging the heart walls is also squeezed out by the powerful contraction of the muscle. Digitalis also has the power of stimulating to a point of intense activity the pneumogastric nerve.

Intercostal Neuralgia.—Frank Billings, M.D., in Chicago *Medical Recorder* for September, deals with this trouble. He regards it always as a secondary affection, and, therefore, a symptom only. The patient and the physician readily overlook the real disease. Neuritis of the intercostal nerves is rare. It may be due to toxic conditions, as in typhoid fever or rheumatism. Pressure from an aneurism may produce it. The functional form is very common. It is usually due to toxæmia from malaria, or lead-poisoning, etc. Auto-intoxication may exist from disease of the kidneys, constipation, or weak heart action ; most commonly it is due to faulty digestion. The trouble may arise from domestic cares, or anxiety and worry. Improper food and lack of outdoor exercise are often found in these cases. The treatment is palliative and radical—the former for the relief of present pain ; the latter for the cure of the conditions at fault and affecting the general health.

Advice to Those Who Contemplate the Study of Medicine.—The *British Medical Journal* for September 7th has some very wise words for young men who are considering the advisability of entering the medical profession. It is of the utmost importance, it says, that the student and his advisers should have a clear idea of the object to be aimed at. Life-long disappointment may be the consequence of a false step at the outset. Among the careers in which the highest prizes are open to all who have wit and energy, and can afford the cost of the necessary course of study, medicine offers to many the highest attractions. The scientific character of the study, the purely personal nature of the work, the life of intimacy with many people of many ranks, the possibility—dim perhaps, but still the possibility—of wealth and honor, and the almost certainty at least of bread and cheese as the reward of patience, sobriety, and hard work, are sure to draw

many to medicine as their career in life. Those who find their way to wealth, influence and position are few. To the majority who commence their professional studies in medicine in October, medicine will prove a harsh mother, and will give little beyond the necessaries of a simple and frugal life. The man who is to succeed must give himself up to being a student for five years at least, and that means that he must have sufficient capital to keep himself during that time, as well as to pay the necessary fees. It is no small matter to fix one's life before-hand for a certain five or six years, and the importance of the decision is in no way lightened by the knowledge that a medical education is peculiarly special, leads to little else but medicine, is of no service in obtaining entry into any other profession or even trade, and that, unless it can be carried through to the end, it means so much loss of time.

Eczema of the Genitals.—J. Abbott Cantrell, M.D., in the August number of Philadelphia *Polyclinic*, says that in his experience this is one of the most disagreeable and distressing complaints that can afflict a person. The disease may attack the penis or scrotum alone, or both in conjunction. The patch may be a small one, and may be moist or dry. The usual condition is a thickened, swollen and infiltrated condition of the parts, very red and painful to the touch. The scrotum may be thrown up in ridges and covered with crusts that leave a raw surface on removal. This inflammation often extends to the anus and adjoining parts. The patient is unable to walk with ease, and the itching is very intense. In the female, the same conditions of swelling, inflammation and irritation exist. In the treatment of this troublesome affection the greatest care must be paid to the digestive organs. No article of diet should be taken that is known to disagree with the patient in the slightest degree. If the action of the intestinal canal is rather sluggish, saline laxatives should be ordered. The kidneys must be kept active, and citrate of potash or lithium in small doses may be given in the morning, and throughout the day if required. When the parts are much swollen, very red and painful, the patient should be ordered to bed, and the inflamed parts frequently bathed and fomented with a saturated solution of boric acid. Black wash is also a good lotion. After the inflammation has been relieved by this means, an ointment of grs. 10 to grs. 30 of calomel to the ounce of zinc oxide ointment as a base. In cases where the skin is much indurated, but not severely inflamed, a stimulating application of grs. 20 salicylic acid to an ounce of vaseline is very useful.

FEVER.—F. M. Wells, M.D., of Charleston, Ind. (St. Louis *Medical Review*), took the above subject for his address before the State Medical Association. He contended that there is no more important study in the whole range of medicine than that of fever, in its many causes and effects. It is encountered in so many diseases, is so obscure in its origin, is fraught with so many consequences, and is so difficult in its treatment. The first difficulty we encounter in the study of fever is that physiologists have not been able to solve the problem of the production of heat and its regulation in the normal state of health. It is true that a vast amount of knowledge has been acquired on the laws of cutaneous evaporation, the influence of circulation, and the supply of food on heat; but still this is only the surface of the great question. It is now known that when living organisms or their toxines are introduced into the system there is a rise of temperature, which continues until the poison is removed from the body or the animal dies. Underlying all this is the whole question of phagocytosis, now occupying the attention of so many experimenters. But there is a physiological and pathological phagocytosis. When germs or toxines enter the system there is an active warfare between the cells of the body on the one hand and the invading enemy on the other. The victory of the former is recovery; of the latter, death. With this warfare there is fever. Some hold that this fever is an aid to the cells of the body to overcome and vanquish the enemy. But it is very hard to understand how the cells of the body can do their work better in a pathological heat than in the normal heat of the body. It is only fair to conclude that the fever is an aid to the germ, rather than to the cell. When we study the habits of the leading organisms that cause disease, we see that they thrive best at a temperature slightly above that of the normal heat of the body. This would seem to favor the view that the fever is an aid to the enemy. Then again, we all know how fatal high temperatures are. Clinically, there is abundance of grounds for the belief that the judicious abstraction of heat shortens the duration of febrile diseases. It seems to improve the resisting power of the body or to weaken the organisms. On the other hand, the rash use of antipyretics may seriously weaken the patient and cause fatal results, or prolong the illness. Great care is necessary in the administration of the whole group of antipyretic drugs. Acetanilid, in acute cases, and quinine, in the more chronic cases, are to be mainly relied upon. The use of sponging and bathing is of the utmost importance. Much care should be exercised to avoid shock in the use of the cold bath.

Croupous Pneumonia in Children.—J. R. Wellington, M.D., in the Maryland *Medical Journal* for August, remarks that this is nearly always a primary disease. The chief predisposing cause is exposure to sudden cold or dampness. In children, is frequently met with in summer. It is most common from the third to the seventh year. Robust children are more prone to this disease than the delicate. It is very rarely secondary to measles, whooping cough, typhoid fever or scarlet fever. The exciting cause is supposed to be the pneumococcus of Frankel, though this organism is found in broncho-pneumonia, cerebro-spinal meningitis, and in the saliva of healthy persons. It is supposed to become more active after exposure to cold, or the body is rendered less resistant. The disease in children passes through the stages of congestion, red and gray hepatization. But these conditions may coexist in different portions of the lung at the same time. Consolidation sometimes begins in the centre of the lobe, and may not reach the surface for two or three days. This renders the early symptoms obscure. Rarely a portion of the lung remains unaffected. The lower right lobe is most frequently affected. There is bronchitis, and over the inflamed lung nearly always pleurisy. The disease is ushered in usually by vomiting. There may be a convulsion, but a chill is rare, except in older children. There is pain, as indicated by the facial expression. There is usually some cough, but expectoration is never seen. Dilated alæ nasi and the respiratory moan are of much assistance in making the diagnosis. The temperature soon runs up to 104° or 105°, and remains high, with little intermission, till the sixth or eighth day. The respirations are relatively more increased in frequency than the pulse. There is a sharp, quick inspiration, a perceptible pause, and an explosive or moaning expiration. There are four atypical forms of the disease. In the abortive form the disease sets in with the usual symptoms, but in two or three days the lungs clear and the symptoms abate. In the wandering form, consolidation appears in different lobes at different times. In the gastric form there is vomiting, diarrhœa, and anorexia and tympanitis. In the cerebral form there are convulsions, delirium, wild or incoherent, and may simulate meningitis. It is a self-limited disease, with a tendency to recovery. Secondary cases are not so favorable. Townsend collected 1,138 cases, out of which only 28 died. In broncho-pneumonia the death-reate is from 30 to 50 per cent. The treatment in mild cases consists of keeping the patient in a room about 70°. The diet should consist of milk, beef juice, albumen water, and broth. At the crisis, brandy, digitalis and strychnine may be required. Local counter-irritation may be kept up with mustard. The author does not speak

highly of poultices. Changing the position of the child and the internal administration of carbonate of ammonia will assist in avoiding respiratory paralysis, which is more to be feared than heart-failure in the child. The temperature yields best to sponging, the wet-pack, or the plunge-bath. Of the many drugs, antipyrine is the best for the reduction of high temperature. For the cough and pain, Dover's powder is the best form in which opium can be given.

Book Notices.

Practical Dietetics, with Special Reference to Diet in Disease. By W. Gilman Thompson, M.D., Professor of Materia Medica, Therapeutics, and Clinical Medicine in the University of the City of New York; Visiting Physician to the Presbyterian and Bellevue Hospitals, New York. Large octavo, eight hundred pages, illustrated. Prices, cloth, $5.00; sheep, $6.00. New York: D. Appleton & Co., publishers, 72 Fifth Ave. Toronto: Canadian agency, N. G. Morang, 63 Yonge Street.

The subject is one which does not receive proper attention either in medical colleges or in the standard works upon the theory and practice of medicine; the directions given in the latter being of a very general and vague character, and in the former it is dismissed in one or two lectures. In hospitals and in the training of nurses too little attention is paid to the subject, while in works on food and dietetics the practical application of dietetics to disease receives but slight notice. This work is intended to remedy these shortcomings and to furnish to the practitioner a text-book containing instructions as to the appropriate diet in diseases which are influenced by right feeding.

Beginning with the elementary composition of foods, the author next classifies them, and takes up in succession force-production and energy: the force-producing value of the different classes; stimulating foods; their economic value; a comparison of the nutritive properties of animal and vegetable foods, and vegetarianism. The classes of foods are next considered, including water, salts, animal and vegetable foods, fats, and oils. In the section on animal foods much attention is given to the subject of milk in all its forms—pure, adulterated, prepared, etc.—in accordance with the great importance of the article so commonly used. Stimulants and beverages, with their good and ill effects, their comparative values, administration, and varieties, are fully and carefully considered.

The various methods of cooking food are given, with the effect of each method on the different classes; also the means used for

condensing and preserving foods. In the article on foods that are required for special conditions the author takes up food in its relation to age, individual size, body weight, sex, diet and heredity, diet and race, and climate and season. Proper attention is paid to the subject of digestion and the conditions which especially affect it. The author considers the general relations of food to special diseases; those that are caused by dietetic errors and the administration of food for the sick, giving the necessary rules as to method, time, etc. Dietetic treatment in fever in general is followed by instructions for diet in specified diseases, with lists of food suitable for the patient in certain stages of the disease, as in the infectious fevers and other acute affections.

The work gives much evidence of careful and intelligent observation on the part of the author, and will, the publishers believe, be found to fill a field heretofore practically unoccupied. It is a book which will be found to be of great assistance to the practitioner in the dietetic treatment of diseases that are influenced by proper feeding, invaluable to the trained nurse in hospital and private nursing, and of inestimable service as a guide in the administration of proper food to infants and invalids in the home.

Intellectual Detachment.—In the *Nineteenth Century* for July, Sir Herbert Maxwell relates the following: "The outspoken ways and caustic sayings of Dr. Jephson, of Leamington, celebrated in the forties and fifties, have furnished the kernal of many anecdotes. One day he was called on by one whom Brantome would have called *une grande dame de par le monde*, the Marchioness of ——. Having listened to a description of her malady, the oracle pronounced judgment: 'An egg and a cup of tea for breakfast, then walk for two hours; a slice of cold beef and half a glass of Madeira for luncheon, then walk again for two hours; fish (except salmon) and a cutlet or wing of fowl for dinner, with a single glass of Madeira or claret; to bed at ten and rise at six, etc. No carriage exercise, please.' 'But, doctor,' she exclaimed at last, thinking he was mistaken in his visitor, 'pray do you know who I am? Do you know—ahem!—my position?' 'Perfectly, madame,' was the reply. 'I am prescribing for an old woman with a deranged stomach.' From this it is clear that it behooved this exalted lady to cultivate detachment as the preliminary to a return to health; to regulate her life without any reference to her rank in the peerage, her station in society, or the number of carriage horses in her stable.—*Boston Medical and Surgical Journal.*

Dr. Wilson has removed from Richmond Hill to College street, in this city.

Correspondence.

The Editors are not responsible for any views expressed by correspondents.

To the Editor of the CANADIAN MEDICAL REVIEW.

DEAR SIR,—One or two correspondents have drawn attention in recent issues of your journal to the encroachments of so-called refractionists, doctors of refraction, opticians and others upon the work which should be done by qualified oculists.

These gentry, who are part and parcel of every jeweller's shop, advertise to examine eyes and fit glasses "free of charge," the patient only paying for the spectacles "if required," this is clearly a breach of the Medical Act, as much so as counter prescribing by chemists, but it seems impossible to get the Council roused into activity. In speaking to an agent of the "prosecuting department," I was told that owing to the animosity against the Medical Council among some of the long-whiskered hayseeds of the Local Legislature, it would be imprudent to make any move, as instead of giving the profession any further power an endeavor would be made to curtail the powers of that body. Now, Mr. Editor, if the statutes of the Council are so arbitrary that any fear of increasing them exists, the sooner they are wiped off the books the better. On the other hand, if they are made for the purpose of protecting medical men they should be fearlessly exercised.

The medical men are not a lot of slaves that they should crouch at the beck and call of ignorant members of the Local House, whose sole aim seems to be the licensing of any old woman or quack who has a "sure thing" in the cancer cure line.

Owing to the overcrowding of the profession at the present time, the difficulty of making even a living for a great many men necessitates every precaution being taken to prevent the small incomes being farther decreased by the inroads of unlicensed, ignorant charlatans, who frequently make much better incomes than physicians. Thanks in many cases to the kind consideration extended towards them by "the clergy," who, strange to say, seem to be "easy marks," judging from the testimonials we see every day in the public press extolling this or that "catarrh remedy," signed by some prominent divine who blazons forth his mental and physical infirmities that all that run may read.

The medical profession is already in a deplorable condition from the crowding resulting from bucolic ambition, furthered by the clap

trap literature of the medical schools carefully distributed so as to wake into activity the latent desire of every plough boy to become "a doctor." The unpleasant fact remains that the medical profession has had a terrible come down in the last ten years, and in fact is no longer a profession, and the M.D. which formerly was a mark of distinction has become so cheap and common that it is not worth the paper it is written on.

MURRAY MCFARLANE.

32 Carlton Street.

Miscellaneous.

Antitoxine Treatment for Diphtheria.

THE following are some of the conclusions arrived at by those who discussed the antitoxine treatment of diphtheria at the recent meeting of the British Medical Association :

Dr. Sidney Martin summed up by saying that his experiments tended to show that the antitoxic serum is capable of counteracting the poisons which are found in the tissues of patients dead of diphtheria. It has only a slight effect upon the febrile rise of temperature produced by the albumen, but it completely counteracts the fatty degeneration of the heart produced by these substances, and to a great extent also the nerve degeneration.

Dr. E. W. Goodall's paper went to prove that antitoxine does not prevent the occurrence of paralysis ; it does not lessen the incidence of albuminuria, nor will it, if employed too late, prevent anuria.

Dr. Alex. Johnston, in his paper, said he had noticed a more rapid separation of the membrane than he expected in many cases. Sudden improvement after injections had been distinguished by its absence. Paralysis of the soft palate had been noticed in about the same proportion of cases as formerly. No benefit was seen from the use of the drug in cases *in extremis*.

Prof. Dr. Von Ranke gave his mortality statistics, those for the last four years being : 1891, 46.0% ; 1892, 56.2% ; 1893, 46.0% ; 1894, till September 24th, 57.0% ; from September 24th, 1894, till July 1st, 1895, 17.7%. In twenty-seven cases of undoubted diphtheritic croup, symptoms of laryngostenosis subsided after the injection. The paper closed by, "We have really got in the serum treatment a most powerful and specific remedy against that disease."

Mr. Lennox Browne took a somewhat conservative view. He concluded by saying that it was abundantly evident that with suitable

precautions the results in this country (Great Britain), at any rate, under serum treatment and under former methods at command, did not at present justify the claim of antitoxine to so high a therapeutical eminence as at foreign centres of observation.

Prof. Dr. A. Bagnisky gave the following statistics : Of cases under

2	the	previous	mortality	was	63.3%,	whilst	now	it	was 25.20%
2— 4	"	"	"	"	52.85%,	"	"	"	17.12%
4— 6	"	"	"	"	37.90%,	"	"	"	17.24%
6— 8	"	"	"	"	27.41%,	"	"	"	11.39%
8—10	"	"	"	"	19.35%,	"	"	"	5.11%
10—12	"	"	"	"	15.07%,	"	"	"	10.00%
12—13	"	"	"	"	13.00%,	"	"	"	0.13%

G. Sims Woodhead said that the period of irrational enthusiasm had now been passed, and that in the opinion of all those who had had much experience of diphtheria and its treatment by antitoxine, this remedy had proved its claim to be far above all other remedies for the cure of the disease.

Dr. Hermann Biggs said that under his charge in New York he had had between 400 and 500 cases treated by antitoxine in their own homes. The mortality had been slightly over 16%. The mortality for the whole of New York had been reduced by over 40%.

Dr. J. Campbell Hall said the results of this form of treatment had been so satisfactory that he would never feel justified in neglecting the serum treatment in any case which he was called upon to deal with.

Chemistry as the Servant of Anatomy.

The French Institute has just elected as a foreign associate Professor Kowalevsky, of St. Petersburg, whose original and novel experiments in anatomy and biology are known to all students of these sciences. Among other ingenious methods of experimentation, he has devised what may be called that of "chemical anatomy;" that is, a system of recognizing certain organs in the lower animals by observing the reactions in them of appropriate injected chemical substances. By this method he has arrived at results that could never have been attained by dissection alone, even with the aid of the most powerful microscope. We translate from a notice of Kowalevsky's work in the *Revue Scientifique* (Paris, August 3rd) an account of some of these experiments :

"M. Kowalevsky has established the most curious and unexpected distinctions; thus, by means of experiments of great elegance and

simplicity, he has succeeded in recognizing in invertebrates the kidneys, the lymphatic glands, and the spleen, though the scapel of ordinary anatomy would have been powerless to discover them. His method is very simple. He injects into the body of the animal colored liquids like carminate of ammonia, indigo carmine, the classic dye of heliotrope, chloride of iron, or impalpable powders such as the carmine or black suspended in India ink, and sometimes the bacteria of charbon, which he cultivates. He lets the animal live for a longer or shorter time and then kills it, and shows what has happened to the injected material.

"One or two examples, taken from innumerable experiments, will suffice to show the precision of the method.

"The tincture of heliotrope injected into a cuttlefish remains blue in the majority of the organs of the body, notably in the multiple appendices situated in front of the branchial hearts; but in these last organs it changes to red. A little ammonia, even its vapor alone, changes it back to blue.

"These branchial hearts have, then, another function than the purely mechanical one: they secrete an acid.

"The choice and picking out of the reagents by the organism is yet much more remarkable in the following experiment:

"Into a St. James' snail was injected an intimate mixture of carminate of ammonia and indigo carmine. The animal was allowed to live for some time and then dissected.

"It is well known that in this mollusk there are glands near the heart, called the precardial glands, and two other much larger glands placed on each side of the visceral mass, called the bodies of Bojanus.

"What action has each of these glands on these reagents? The carminate of ammonia remains in the precardial glands, which give an acid reaction after the injection of heliotrope; the indigo carmine is found in the body of Bojanus.

"The precardial glands are, then, the homologues of the cortical layer of the kidneys, where are found the Malpighian bodies having an acid reaction, while the bodies of Bojanus, with their alkaline reaction, . . . correspond to the zone of the *tubuli contorti*.

"It is useless to pursue further the analysis of this method of chemical anatomy. Nevertheless it is impossible not to recall how happily injections of chloride of iron serve in the diagnosis of some organs; for in exploring the organism of the animal that has been given an injection we can, by the aid of the yellow prussiate of potash and of the blue color that it gives with iron, recognize unmistakably where the iron has collected and where it has left no trace. . . .

"The consequence of these studies is the discovery of the duplication and division of several glands, and of organs that anatomy and the scalpel alone had not revealed to us and could not possibly have discovered. M. Kowalevsky has thus revealed to us scattered groups of cells, or even isolated cells, that represent the most complete organs.

"Thus, by this method he has just sought for the lymphatic glands of myriapods, and has found them scattered about in the form of groups of cells, or of isolated cells on the sides of the body or elsewhere, where they had never hitherto been recognized."—*The Literary Digest.*

Necessity of Frequent Visits.—The Supreme Court of California (Todd *vs.* Myers, 40 Cal., 355), in an action brought by a physician for professional services—the defence being that the visits were too frequent and not necessary—rules that "The defendant having admitted the employment of the plaintiff as a physician to treat his wife and children, the plaintiff was the proper judge of the necessity of frequent visits, and, in the absence of proof to the contrary, the Court will presume that all the professional visits made were deemed necessary and were properly made. It would be a dangerous doctrine for the sick to require a physician to be able to prove the necessity of each visit before he can recover for his services. This is necessarily a matter of judgment, and one concerning which no one save the attending physician can decide. It depends not only upon the condition of the patient, but in some degree upon the course of treatment adopted."—*Medicine.*

Treatment in Acute and Chronic Cystitis.—*Acute Cystitis*—Resulting from gonorrhœa and presenting symptoms of distress and pain over pubes, frequent and urgent inclination to micturate, urine cloudy and depositing slight amount of mucus on stauding. *Chronic Cystitis*—Resulting from enlarged prostated, retained or altered urine, or from gout or nervous derangement—mucus or muco-pus rendering the urine more or less cloudy or opague. *Treatment*—In addition to the mechanical treatment, usually essential in the management of disorders of this class, the administration of Lambert's "Lithiated Hydrangea" is often of the greatest service. A practitioner of wide experience says: "I have used Lambert's 'Lithiated Hydrangea' on various persons affected with diverse and painful manifestations of chronic rheumatism, gout, lithiasis-urica, nephritic calculus and functional disturbances of the renal system, with excellent results, and I

consider it a valuable remedy for normalizing the renal function, for promoting the active elimination of uric acid and to calm the congestive conditions of the kidneys and of the urinary mucous membrane."

Expert Testimony as Viewed in Illinois.—Illinois is still very far from being completely civilized. Circuit Court Judge Creighton, of Sangamon County, has recently been unburdening his mind on the subject of expert testimony and allied topics, and the burden drops off with a gentle splash that recalls the fall of the buffalo chip, in days when that animal roamed over the judge's prairies. Speaking of experts, he says that "of course, the court has no power to compel an expert to make an examination or prepare himself to testify without payment; but he thinks that an expert can be made to testify, provided he is not obliged to make special preparation." From which it seems that the judge thinks the chemist or surgeon or physician can go and testify upon any case, if he chooses, without preparation. The learned judge furthermore says that physicians in Illinois are "favored children of the State." "A department of the State Government," he says, "is maintained very largely for their benefit, and they are so protected by the laws of the State and by public opinion and confidence that in five minutes' time a doctor may earn more than an ordinary laborer could in a day!" If our Illinois *confrères* are really earning $2.00 every five minutes, we trust that the fact will not be made known, for all other regions of the country will immediately lose their medical citizens. The argument that the doctor is so favored by the State that he can earn $2.00 in five minutes is worthy of a giant mind, and deserves to go down in the history of medical jurisprudence emblazoned in letters of gold, or wafted through the empyrean by the swiftest and most characteristic cyclonic whirlwind that the prairies of Illinois can generate. The theory that the State of Illinois has a department of its government—viz., the Health Department—largely for the benefit of the medical profession is also extremely unique, and could hardly have come from any mind but one highly trained in Sangamon County. To the common-sense of mankind it has heretofore seemed that the creation of the Health Department was, if anything, prejudicial to the medical profession, since it cuts down mortality and prevents sickness and epidemics, by all of which the medical man is supposed to, and does, gain his livelihood. Medical literature is at least enriched by the marvellous brain of Judge Creighton, which thus, in one single effort, is able to overturn common knowledge and place before the eyes of the astonished world more facts in medical jurisprudence than were ever dreamed of by any philosopher from Descartes to B. O. Flower.—*N. Y. Medical Record.*

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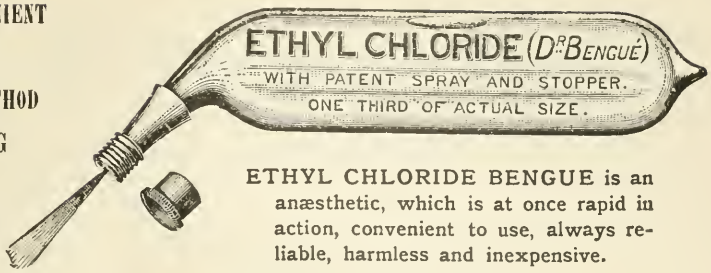

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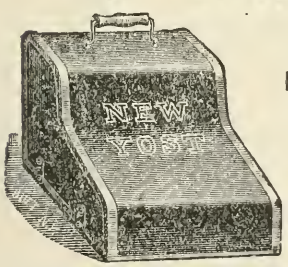

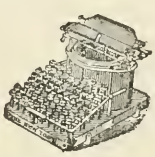

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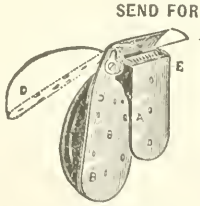

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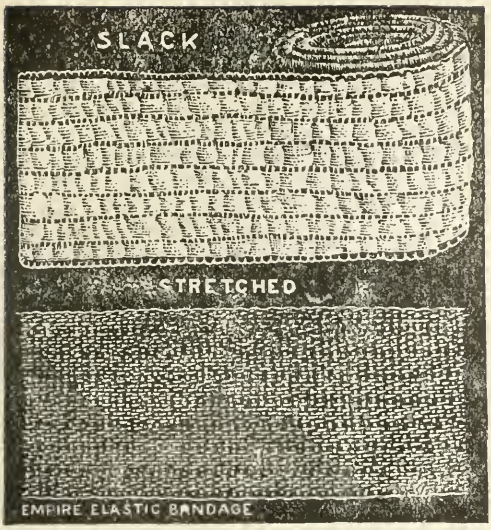

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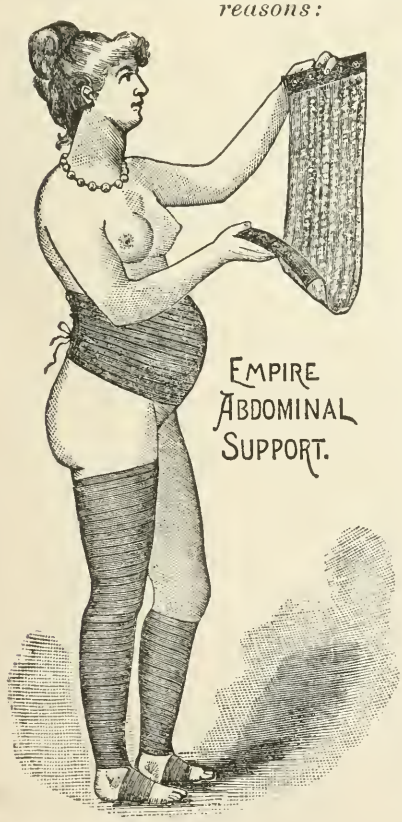

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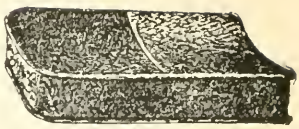

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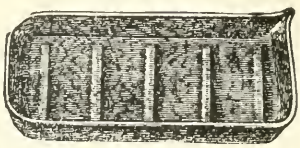

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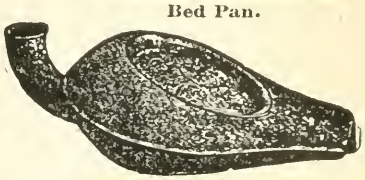

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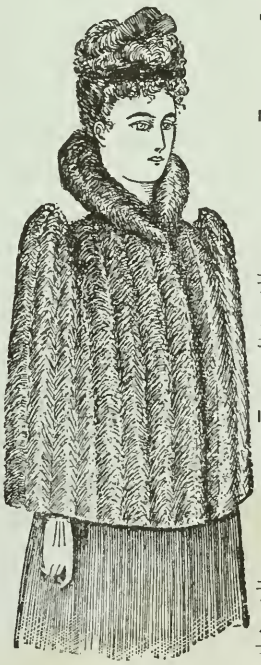

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